



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/758,035

01/16/2004

Kong Kim

Q79407

6139

23373 7590 05/03/2007
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

FALASCO, LOUIS V

ART UNIT

PAPER NUMBER

1773

MAIL DATE

DELIVERY MODE

05/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,035	Applicant(s) KIM ET AL.	
	Examiner Louis Falasco	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Papers Received

1. The Amendment and Remarks filed 03/22/07 are acknowledged.

Claims

2. The claims are 1-9. Claims 8 and 9 remain withdrawn from consideration as drawn to a non-elected invention.
3. The claims under consideration remain 1-7.

Claim Rejections

Rejections

4. Rejections made in the previous Office Action have been withdrawn in view of Amendments to the claims and no longer maintained.

Statutory Basis

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

Art Unit: 1773


applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Rejections

7. (New) Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by **Saito** (US 6579634).

Saito teaches a disk substrate having a base and a protection layer on a soft magnetic layer surface. **Saito** illustrates this at any of Figs. 1(a), 2-5(a), 7(a) and 8(e)

having protection layer, 4, on the soft magnetic layer, 3:  also see col. 4 ln 66 to col. ln 5, col. 5 lns 43-48, col. 7 lns 30-33.

As regards claim 3 wherein the protection layer is non-magnetic, see col. 1 ln 19-21.

As regards claim 4 wherein the protection layer is carbon, see col. 1 ln 19.

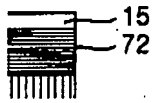
As regards claim 5 wherein the base member is glass, see col. 1 ln 21, col. 4 ln 56.

As regards claim 6 wherein texture controls magnetic anisotropy, though merely an inherent property of surface quality, see col. 3 ln 11-16, col. 8 lns 7-13.

As regards claim 7 perpendicular magnetic recording, see col. 2 lns 37 to 50.

8. (New) Claims 1, 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by **Futamoto et al** (US 6403203)

Futamoto et al teaches a disk substrate with a protection layer on a soft magnetic layer surface. This is illustrated at any of Figs. 7 to 10 with a disk substrate with a soft magnetic layer, 72, and a protection layer, 15, on the soft magnetic layer surface.



; also col. 8 lns 29-68; col. 9 lns 9-14; col. 10 lns 3,4; col. 14 lns 25-29.

As regards claim 3 wherein the protection layer is made of a non-magnetic substance – see col. 12 ln 43.

As regards claim 4 wherein the protection layer is a carbon layer see col. 12 ln 43.

As regards claim 5 wherein the disk base member is glass, see col. 9 ln 66.

As regards claim 6 wherein the disk base member has a texture for magnetic anisotropy, see col. 5 lns 18-22; col. 10 lns 22-24; col. 18 lns 23-28 structure.

As regards claim 7 perpendicular magnetic disk, see col. 18 lns 48-51 and summarized at Table 3.

9. (New) Claims 1 and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by **Nishikawa et al** (US 2003/0099867).

Nishikawa et al teaches a disk substrate with a protection layer on a soft magnetic layer surface, ¶ [0043], [0055]. Perpendicular recording media is listed in the claim preamble. The preamble has not been treated as an article *limitation* since these claims do not set forth the structural limitation for a perpendicular media use. This has been treated as merely an intended use and given no weight. *In re Stencel*, 4 USPQ2d 1071.

As regards claim 3 wherein the protection layer is non-magnetic, see ¶[0055].

As regards claim 4 wherein the protection layer is carbon, see ¶[0055].

As regards claim 5 wherein: the disk base member is made of glass, see ¶[0047].

10. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of **Saito** or **Futamoto et al** as applied to claims 1 and 3-7 above, and further in view of either **Honda et al** (US 5851643-previously cited) or **Tanahashi et al** (US 6511761-previously cited)

Saito or **Futamoto et al** teach the requirements of these claims except specifying an ordinary, amorphous carbon protection layer. However, **Honda et al** or **Tanahashi et al** teach ordinary, amorphous carbon well known in the recording art.

In **Honda et al** see ordinary carbon layer without crystallization col. 17 ln 43 col. 22 ln 60. Additionally **Honda et al** also teaches texture anisotropy col. 1 ln 66 to col. 2 ln 2 in perpendicular recording media col. 2 lns 43-55. In **Tanahashi et al** also see ordinary carbon layer without crystallization col. 3 ln 47 col. 4 ln 55 also teaches texture anisotropy col. 8 ln 33, 34, col. 9 ln 2 and perpendicular recording col. 8 lns 63-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the amorphous carbon as shown by **Honda et al** or **Tanahashi et al** in recording media of any of **Saito**, or **Futamoto et al** for the purpose of providing protection in magnetic storage media. One skilled in the art would have been motivated to adopt **Honda et al** or **Tanahashi et al** with the expectation of

decreasing the recording media noise **Honda et al** or **Tanahashi et al** (**Honda et al** col. 2 lns 18-26 or **Tanahashi et al** col. 1 lns 12-20).

Answer to Arguments

11. Applicants' have argued the distinctions of soft magnetic layer pointing the results with the *FeTaC* soft magnetic composition in perpendicular recording media. However, the *FeTaC* soft magnetic composition argument is moot since no claim is commensurate with this showing since the probative value of a soft magnetic composition since *FeTaC* has not been claimed. Additionally the showing is ineffective in overcoming a rejection made under 35 U.S.C. 102.
12. Applicants' additional arguments with respect to the claims under consideration filed 3/22/07 have been fully considered but they are considered moot in view of the new grounds of rejection.

Conclusion

13. The claims are 1-9. Claims 8 and 9 remain withdrawn from consideration as drawn to a non-elected invention.
14. The claims under consideration remain 1-7, no claim has been allowed.

Applicant's amendment filed 3/22/07 requiring the protection layer on the surface of the soft magnetic layer necessitated the new grounds of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone

Art Unit: 1773

number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LF
LF
04/07


CAROL CHANEY
SUPERVISORY PATENT EXAMINER